

**CAPACITY DEVELOPMENT
SELF ASSESSMENT GUIDE
FOR
CLASS A
PUBLIC WATER SYSTEMS**



Alaska Department of Environmental Conservation



**National
Rural
Water
Association**

Capacity Development Background

The 1996 amendments to the Safe Drinking Water Act (SDWA) requires that new public water supply systems or systems applying for state revolving loan funds be able to demonstrate certain capabilities. In addition, the 1996 amendments require states to develop a strategy to assess capacity, and assist existing public water systems to develop capacity. Those water systems must have the technical, managerial and financial capability to meet present and foreseeable regulations, provide adequate water service and operate as financially viable entities. This responsibility is referred to as "Capacity Development." The State of Alaska has agreed to adopt the same requirements as found in the 1996 amendments to the SDWA through the State Drinking Water and Wastewater Program. This has been accomplished through the adoption of regulations and strategies.

It is important that all Class A public water systems have appropriate technical, financial and managerial capacities. Thus, every Board member, council member, owner, and manager need to know certain critical aspects of their water system and how they affect its operations. It is especially essential that public water supply systems (under 500 population) recognize that their systems are most vulnerable in their ability to demonstrate capacity.

This document is a self-assessment tool for public water systems that will identify the critical areas and focus on improvements that could be made in their operations. This self-assessment is intended to be used by all Class A Public Water Systems

General Self Assessment Guide Information

1. It is important to stress that this assessment is to be conducted by staff of the water system.
2. Capacity will be assessed in three areas: Technical, Managerial, and Financial.
A table is included for each area, listing criteria to uses in evaluating the water utility.
3. Following each table, is a field guide of descriptions and explanations of how to rate each assessment type.
4. This self-assessment should only take a few hours to complete.
It may take addition time to locate certain information or update files.
5. Tips and suggested practices are included to enhance the assessment process.

Directions

1. For each area (Technical, Mechanical, or Financial), evaluate each assessment type as low, medium, or high.
2. Use the Field Guide definitions and explanations to assist in making the evaluation for each assessment.
3. For assistance in evaluating an assessment type, check with the resources listed in the "Resource" column of each table.
4. Once this self-assessment is completed, it should be presented to the board, council, or owner of the water system. Assessment types scoring low or medium should be prioritized and corrected.

Technical Capacity

Your water source can be surface, ground or purchased water or any combination of the three. Each of these sources has different requirements of which you must be aware.

Good planning requires that you continually evaluate your source to determine if it is adequate to deliver the amount of water required not only for the present but also into the future.

Although not a requirement at this time, a source water or ground water/wellhead protection plan is a good idea. The State has a Source Water Protection Program. Increasingly, more and more water systems are taking steps to protect their water source by ordinances and planning. All water systems should have clearly defined service areas.

All Class A water systems must meet the requirements of the SDWA and other standards set by ADEC.

Plans for operations and maintenance are good ideas that prevent problems of memory and employee turnover. Accurate maps are a necessity for all well run systems.

Keeping your water loss at a very low level is a well-recognized method of keeping costs down.

All operators must have a level of certification required for their system. In addition to certification, operators should attend training to assist them in keeping their skills at their highest level

Emergency plans are needed to allow vital water services to be continued during a time of crisis.

Standard Operations Manuals are another method of insuring that water systems continue to operate properly even with a change of personnel.

A sanitary survey is an onsite review by ADEC or a qualified third party, of the water system source, facilities (treatment, storage, and distribution), equipment, operation, and maintenance of a public water system. A sanitary survey is meant to identify problems, which may affect the safety of the water. The survey is based on a physical inspection of the water system and how the system is operated and maintained.

Violations of the SDWA are serious and should be corrected immediately. Most violations are for monitoring and sampling. While these violations are not as serious as exceeding a contaminant level, they should be promptly corrected. Steps should be taken to insure that this type of incident is prevented in the future.

Safety programs are designed to protect employees and the public. Water systems have many potentially dangerous situations that can be eliminated with a little planning.

(This page adopted and modified from NRWA Self-Assessment)

Technical (T) Capacity Assessment

| Assessment Type | High | Medium | Low | Resources |
|--|-------------|---------------|------------|---|
| A. Monitoring and Reporting | | | | Local ADEC Office |
| B. Operation & Maintenance Program | | | | Regional Health Corporation, RMW, ATTAC, NRWA |
| C. Sanitary Survey Results | | | | Local ADEC, Regional Health Corporation |
| D. Operator Certification | | | | ADEC Operator Certification Program |
| E. Operation Approval | | | | Local DEC Office |
| F. Water Rights | | | | Department of Natural Resources |

Notes:

Technical Assistance can also be found at resources such as local University branches, Libraries, National Drinking Water Clearinghouse, and the Internet.

Abbreviations:

ADEC = Alaska Department of Environmental Conservation

ATTAC = Alaska Training and Technical Assistance Center (University of Alaska, Sitka)

DCED = Department of Community & Economic Development

DNR = Division of Natural Resources

RCA = Regulatory Commission of Alaska

RMW = Remote Maintenance Worker Program

NRWA = National Rural Water Association

Field Guide for Technical Capacity Assessment

A. Monitoring and Reporting

Low:

- The water system is on the State Significant Non-Compliance (SNC) List for total coliform bacteria and/or nitrates, and/or;
- The water system has submitted less than 50 percent of the required operator reports over the last three (3) years.

Medium:

- The water system has submitted more than 50 percent, but less than 90 percent, of the required operator reports over the last three years, and/or;
- The water system has not sampled for Volatile Organic Compounds, Synthetic Organic Compounds, Inorganic Compounds, radionuclides, copper, or lead.
- The water system is on the SNC for failure to sample for one of the above noted contaminants.

High:

- The water system is in compliance with State monitoring and reporting requirements.
- The water system has submitted over 90 percent of the required reports for the last three (3) years.

B. Operation & Maintenance Program

Low:

- No operation & maintenance plan has been incorporated into the daily operation of the water system. Less than adequate supply of tools, and/or spare parts are available to operate vital system components.

Medium:

- The existing operation & maintenance plan exists but is not used. Maintenance logs not kept; equipment failures due to a lack of adequate maintenance.

High:

- The existing operation & maintenance plan has been incorporated into the daily operation of the water system. Sufficient supplies, tools, and spare parts are available to operate vital system components.

C. Sanitary Survey Results

Low:

- The owner of the water system has not scheduled the required sanitary survey.

Medium:

- The owner of the water system has had the required sanitary survey completed. However, there is no written record of deficiencies found during the last sanitary survey being addressed.

High:

- The owner of the water system has had the required sanitary survey completed. There is written record of the deficiencies found during the last sanitary survey being addressed.

Field Guide for Technical Capacity Assessment

D. Operator Certification

Low:

- The operator is not certified. The number of operators is not sufficient to operate the existing water system.

Medium:

- The operator is certified but not at the level required by the existing water system. The number of operators is not sufficient to operate the existing water system.

High:

- The operator is certified at the level required by the existing water system. The number of operators is sufficient to operate the existing water system.

E. Operation Approval

Low:

- Water system was installed without obtaining written approval of construction drawings from ADEC.
- Owner, operator or Professional Engineer did not obtain final operation approval; as a result water system is being operated without obtaining final operation approval from ADEC.

Medium:

- Water system was installed after obtaining written approval of construction drawings and specifications. However, is operating without obtaining final operation approval from ADEC.

High:

- Water system was installed after obtaining written approval of construction drawings and specifications. Final operation approval has been issued from ADEC.

F. Water Rights

Low:

- Water rights are either non-existent, they have been invalidated, or the owner has not applied for water rights.

Medium:

- The owner of the water system has applied for water rights and they are in the process of being granted.

High:

- Water rights have been granted.

Managerial Capacity

The ownership or governance structure of your water system dictates the legal obligations that must be followed. You should be aware of your responsibilities as an owner, a council member, or a board member. They are all different.

For municipalities, tribal entities, and non-profit organizations, it is important that ordinances and by-laws affecting the entity be kept up to date and changed when necessary. They should be dated with the last time they were changed.

Entities are often required to meet on a regular basis. Minutes of these meetings are usually required to be kept.

Public entities are typically required to have an annual budget presented and approved by the governance, prior to the start of the fiscal year.

All employers are required to have a Federal Tax ID number. Class A public water systems should have written operational policies. This insures that customers are treated equally and does much to avoid lawsuits. These policies should also be kept up to date to reflect actions of the governance body and changes in state and federal laws.

The person in charge of the Class A public water system should be clearly defined. If more than one person is employed, there should be a staffing chart or communications chart. Also, there should be written and up to date personnel policies. These insure that every employee is treated consistently and fairly.

There are many federal agencies that are involved in some aspect of water regulation. Remaining in compliance with all federal and state regulations is important, yet often complex.

(This page adopted and modified from NRW Self-Assessment)

Managerial (M) Capacity Assessment

| Assessment Type | High | Medium | Low | Resources |
|--|------|--------|-----|-----------------|
| A. By-laws, Ordinances, or Tariffs | | | | DCED, RCA |
| B. Organization | | | | See Notes Below |
| C. Staffing (does not include operator) | | | | See Notes Below |
| D. Policies | | | | See Notes Below |
| E. Effective Linkages | | | | See Notes Below |

Notes:

Managerial Assistance can be found at resources such as DCED, NRWA, RCA, ATTAC, local University branches, Libraries, National Drinking Water Clearinghouse, and the Internet.

Abbreviations:

ADEC = Alaska Department of Environmental Conservation

ATTAC = Alaska Training and Technical Assistance Center (University of Alaska, Sitka)

DCED = Department of Community & Economic Development

RCA = Regulatory Commission of Alaska

NRWA = National Rural Water Association

Field Guide for Managerial Capacity Assessment

A. By-laws, Ordinances, or Tariffs

Low:

- By-laws and ordinances have not been reviewed or updated since the Class A public water system was formed. No formally adopted tariff or rate schedule exists for the existing Class A public water system.

Medium:

- By-laws, ordinances, tariffs, or rate schedules have not been reviewed or updated in the last three (3) years.

High:

- By-laws, ordinances, tariffs, or rate schedules are used and are regularly reviewed or updated.

B. Organization (includes identification of owner and operator)

Low:

- No documentation of organization structure exists.
- No clear identification of owner, operator, and all other water system staff. There is no clear and legal record defining who is responsible for the management and operation / maintenance of the Class A public water system.

Medium:

- Organization structure exists, but is unclear.
- Identification of water system owner and other personnel is unclear. Some legal records exist but are not complete.

High:

- A clear organization structure exists.
- Clear identification of owner, operator, and all other water system staff has been provided.
- There is a very clear and legal record defining who is responsible for the management and operation/ maintenance of the existing Class A public water system.

C. Staffing (does not include operator)

Low:

- There are no clearly defined and written job descriptions for staff.
- No training has been provided to water system staff.

Medium:

- Although there are clearly defined and written job descriptions for each staff member, they are not being used. Limited training has been made available for water system staff.

High:

- There are clearly defined and written job descriptions for each staff member and they are being followed. There is a training schedule for all water system staff.

Field Guide for Managerial Capacity Assessment

D. Policies

Low:

- No written policies covering personnel, customer service, safety, and risk management.

Medium:

- Written policies covering personnel, customer service, safety, and risk management do exist, but are not being used.

High:

- Written policies covering personnel, customer service, safety and risk management do exist and are actively used and modified.

E. Effective linkages

Low:

- No one knows which agencies and private sector firms provide assistance or regulate Class A public water systems.

Medium:

- Although different staff know which agencies and private sector firms provide assistance and regulate Class A public water systems, this knowledge cannot be shared.

High:

- There is a written policy covering which agencies and private sector firms provide assistance and regulate Class A public water systems.

Financial Capacity

Very simply stated, water systems provide water to homes and businesses and receive money for it. Budgeting is an important part of this process. It allows you to project the expected income and expenses for the upcoming year. This will show if sufficient funds will be available to pay the bills.

The budget should be written and reviewed with the financial statements. If your assets (the value of all your money and property) are greater than your liabilities (the value of all you owe), your water system is solvent. The more that assets exceed liabilities, the more funds that can be put aside for replacing equipment and future construction. In the event that liabilities exceed assets, you should have a plan that will quickly correct this problem. To do otherwise will result in bills not being paid and eventually bankruptcy. Your last audit is a good place to find these numbers.

A long-range financial plan establishes financial goals. It is a roadmap detailing how your water system will remain financially healthy and achieve these financial goals.

Having reserves and properly accounting for depreciation are fundamental to keeping your Class A public water system healthy. Reserves should be designated for specific future projects. A capital improvement plan shows how these funds will be used to replace items as they wear out and how when new items will be purchased to upgrade the system.

There are many necessary controls that insure the financial integrity of your water system. Having monthly financial statements will assist in managing activities. Having them reviewed by the governing board or council or owner is important. This is because they have a legal responsibility for their Class A public water system. Class A public water systems should have an annual audit. This audit will show the accuracy of the monthly financial reports. Written financial policies assure that matters are dealt with in a consistent fashion. Reviewing the financial reports will show when it is time to review the rate structure.

Your rate structure should produce enough income to cover your current expenses, replacement costs for existing equipment and structures, produce sufficient reserves and meet all your contractual obligations. If it does not, it should be adjusted immediately. It should be reviewed on an annual basis to determine if it is sufficient for the upcoming year.

All your contractual obligations must be met. Otherwise, your Class A public water system will not be considered financially sound.

(This page adopted and modified from NRWA Self-Assessment)

Financial (F) Capacity Assessment

| Assessment Type | High | Medium | Low | Resources |
|--|-------------|---------------|------------|------------------|
| A. Accounting Practices | | | | See Notes Below |
| B. Annual Budget: | | | | See Notes Below |
| C. Water System Rates | | | | See Notes Below |
| D. Accounts Payable and/or Receivable | | | | See Notes Below |
| E. Periodic Budget Reports / Balance Sheets | | | | See Notes Below |

Notes:

Financial Assistance can be found at resources such as DCED, NRWA, ATTAC, local University branches, Libraries, National Drinking Water Clearinghouse, and the Internet.

Abbreviations:

ATTAC = Alaska Training and Technical Assistance Center (University of Alaska, Sitka)

DCED = Department of Community & Economic Development

NRWA = National Rural Water Association

Field Guide for Financial Capacity Assessment

A. Water System Accounting Practices

Low:

- Standard accounting principles are not being used to account for and identify water system revenue and expenses. Additionally, either no financial audit of the water system has been performed, or if an audit was performed, an adverse opinion was issued.

Medium:

- Some type of standard accounting practice is being used, however, the owner cannot accurately track revenue and expenses. There has been a financial audit within the last five (5) years, but it resulted in a qualified auditor's opinion or a management letter noting some exceptions.

High:

- The water system is using the Universal System of Accounts and is regulated by RCA. Financial audits have been conducted in the past five (5) years resulting in an unqualified audit opinion.

B. Water System Annual Budget

Low:

- No annual budget.

Medium:

- Annual budget completed, but does not meet the demands of operation and maintenance requirements.

High:

- Annual budget is completed, approved, and filed as required by the water system ordinances/tariffs/by-laws and meets the demands of operation and maintenance.

C. Water System Rates

Low:

- Water system rates were set and adopted in writing, but did not include all types of users (residential and commercial users).

Medium:

- Water system rates were set and adopted in writing, but did not examine the sustainability and viability to all users groups, or;
- Water system rates have not been reviewed within the past three (3) years.

High:

- Water system rates were set and adopted in writing assuring sustainability and viability to all users while under direct oversight from a regulatory agency or through public comments.

Field Guide for Financial Capacity Assessment

D. Water System Accounts Payable and/or Receivable

Low:

- Greater than 50 percent of accounts payable and/or receivable of any type are delinquent.
- A lien on assets is present.

Medium:

- No more than 50 percent of accounts payable and/or receivable of any type are more than three (3) months behind.

High:

- No more than 20 percent of accounts payable and/or receivable of any type are more than three (3) months behind.

E. Water System Periodic Budget Reports/Balance Sheets

Low:

- Periodic budget reports/balance sheets are neither produced nor approved by the council or board.

Medium:

- Informal periodic budget reports/balance sheets are produced but are not approved by the council or board.

High:

- Periodic budget reports/balance sheets are produced and approved by the council or board.